Ashley National Forest Aspen Restoration Project
Ashley National Forest
Utah
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Signed:_/s/Pamela Manders_____Date: November 15, 2019
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Signed:/s/Bob Christensen__ Date:_January 28th, 2021
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Table 1. Determination of effects based on proposed action.

Scientific Name	Common Name	Status	Determination
Lynx Canadensis	Canada lynx	Threatened	NE
Coccyzus americanus	Yellow-billed cuckoo	Threatened	NE
Strix occidentalis lucida	Mexican spotted owl	Threatened	NE
Gulo gulo	Wolverine	Sensitive	NI
Ovis candadendsis	Bighorn sheep	Sensitive	NI
Corynorhinor townsendii townsendii	Townsend's Western big-eared bat	Sensitive	NI
Euderma maculatum	Spotted bat	Sensitive	NI
Haliaeetus leucocephalus	Bald eagle	Sensitive	NI
Aegolius funereus	Boreal owl	Sensitive	NI
Centrocercus urophasianus	Greater sage-grouse	Sensitive	NI
Falco peregrinus anatum	Peregrine falcon	Sensitive	NI
Psiloscops flammeolus	Flammulated owl	Sensitive	MIIH
Picoides tridactylus	Three-toed woodpecker	Sensitive	MIIH
Strix nebulosa	Great gray owl	Sensitive	NI
Accipiter gentilis	Northern goshawk	Sensitive	MIIH
Brachylagus idahoensis	Pygmy rabbit	Sensitive	NI
Danaus plexippus plexippus	Monarch butterfly	Sensitive	NI

Federally Listed Determinations: NE-No Effect; Forest Service Sensitive: NI-No Impact, MIIH-May Impact Individuals, but Will Not Likely Contribute to a Trend Towards Federal Listing or Loss of Population Viability.

INTRODUCTION

The purpose of this Biological Assessment (BA)/Biological Evaluation (BE) is to provide an analysis for the activities proposed under the Northern Utah Aspen Restoration project on the Ashley National Forest and to determine whether they have a potential to affect Threatened, Endangered (T&E) and Forest Service Sensitive (FSS) plant species and their habitats.

CURRENT MANAGEMENT DIRECTION

A BA is being prepared in accordance with the Endangered Species Act of 1973 as amended (16 USC 1531 et seq.). Under this act, federal agencies must ensure that any action authorized, funded, or carried out by the agency is not likely to (a) jeopardize the continued existence of any listed species or (b) result in the destruction or adverse modification of a listed species' designated critical habitat. Section 7 of the act requires federal agencies to consult the U.S. Fish and Wildlife Service concerning listed (i.e. threatened or endangered) plant species that fall under their jurisdiction.

The Forest Service Manual, Section 2670 (USDA 2005) provides policy for the protection of sensitive species and calls for the development and implementation of management practices to ensure that species do not become threatened or endangered because of Forest Service actions. It requires a review of all activities or programs that are planned, funded, executed, or permitted for possible effects on federally listed or FSS species (FSM 2672.4, USDA 2005). A BE provides the means to conduct this review, analyze the significance of potential adverse effects, and determine how negative impacts will be minimized or avoided for those species whose viability has been identified as a concern.

Objectives of a BA/BE are to ensure that Forest Service actions do not contribute to loss of viability of any native or desired nonnative plant or animal species; ensure that Forest Service actions do not jeopardize or adversely modify critical habitat of Federally listed species; and provide a process and standard through which rare plant species receive full consideration throughout the planning process, reducing negative impacts on species and enhancing opportunities for mitigation.

Further guidance is provided by Regional and Forest Plan direction. The Ashley National Forest Plan which provides direction to manage the viability of Threatened, Endangered, and Sensitive plants primary purpose of the direction is to assure that existing habitat of these species is adequately protected and that additional habitat is provided to perpetuate the species. This direction implements the protections legislated in the National Forest Management Act and the Endangered Species Act.

BACKGROUND

Aspen is a disproportionally important forest community in the Interior West, supporting significant biological diversity and providing increased water yields and ecosystem resiliency to fire. Aspen ecosystems can support a wide array of plant and animal species due to their high productivity and structural diversity. Many consider it the most important deciduous forest type in western North America. In addition, aspen stands play an increasingly important role in the suppression and management of wildfires because they can act as natural fuel breaks.
Many aspen populations across the west are declining due to drought, ungulate browsing, and lack of disturbance, particularly fire, requiring active restoration efforts to maintain and improve aspen forest health in the region. The primary method for aspen reproduction is suckering from the clonal root system. Therefore, any decline in aspen is concerning because the loss of aspen presence is not easily recovered and may be permanent.

The Ashley National Forest is home to large acreages of persistent and seral aspen communities; approximately 184,986 acres on the forest. This project will help maintain and improve the health of

aspen communities across northern Utah and southwest Wyoming on the forest, preventing further decline.

Project website: https://www.fs.usda.gov/projects/ashley/landmanagement/projects

General Location: The Ashley National Forest covers the northeastern part of Utah and southwest Wyoming. The project area is shown in Figure 2 below.

1.1 Existing Vegetation Conditions

In the persistent aspen, where mature stands are declining, we are typically seeing successful regeneration. However, without active treatments in some of these stands, the skew towards a landscape with mature and old stands would continue for long time periods.
In the seral aspen, there is an abundance of late seral conditions and moderate to extensive colonization by conifers. We are seeing little recruitment of new aspen in these stands (Figure 1). Eventually, these stands with a conifer component would continue through succession to a conifer dominated cover type and possible the long-term loss of the aspen clone if not treated or disturbed by natural events such as fire.

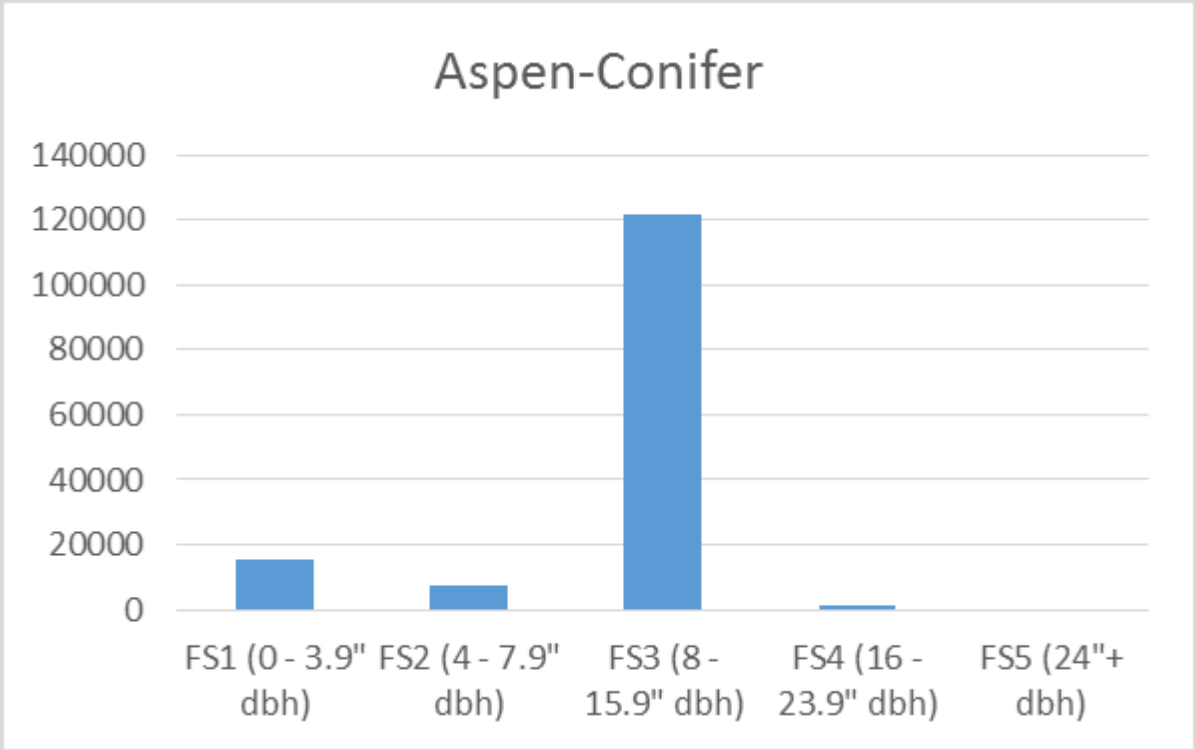

Figure 1. Acreage of seral aspen forest type on the Ashley National Forest by diameter at breast height class group.

PURPOSE AND NEED

Desired conditions for aspen on the Forest includes a heterogeneous mosaic of age classes, with young, mid, and old age classes represented across the landscape. Aspen regeneration should be sufficient to withstand browsing pressure from wildlife and livestock and still provide sufficient recruitment to ensure stand maintenance or stand replacement. Seral aspen forests would be maintained by periodic disturbance and would not be converted at large spatial scales to conifer forest due to lack of disturbance. Grass, forb, and shrub growth would be productive, providing forage and browse for both wildlife and livestock. A

mosaic of healthy aspen stands of varying age classes across the landscape would provide opportunities to manage future wildfires for resource objectives and to suppress fires with undesirable fire effects. The current state of aspen in northern Utah does not meet these conditions, and there is a need for active restoration treatments.

The purpose of this project is to begin a programmatic approach to restoring aspen forests where an assessment has indicated a need for treatment with consideration of the effects of ungulate or livestock browsing. The goals and objectives of the project are to move aspen forests closer to the desired future conditions and:

1. Increase aspen resilience and improve wildlife habitat by:
    - Increasing the age-class diversity of aspen on the landscape
    - Restoring and maintaining self-replacing aspen stands
2. Increase forest resistance to uncharacteristically large and severe wildfires, and increase opportunities for managing wildfires for natural resource objectives by:
    - Expanding the extent of aspen on the landscape
    - Reducing conifers in aspen-dominated stands to reduce fire intensity

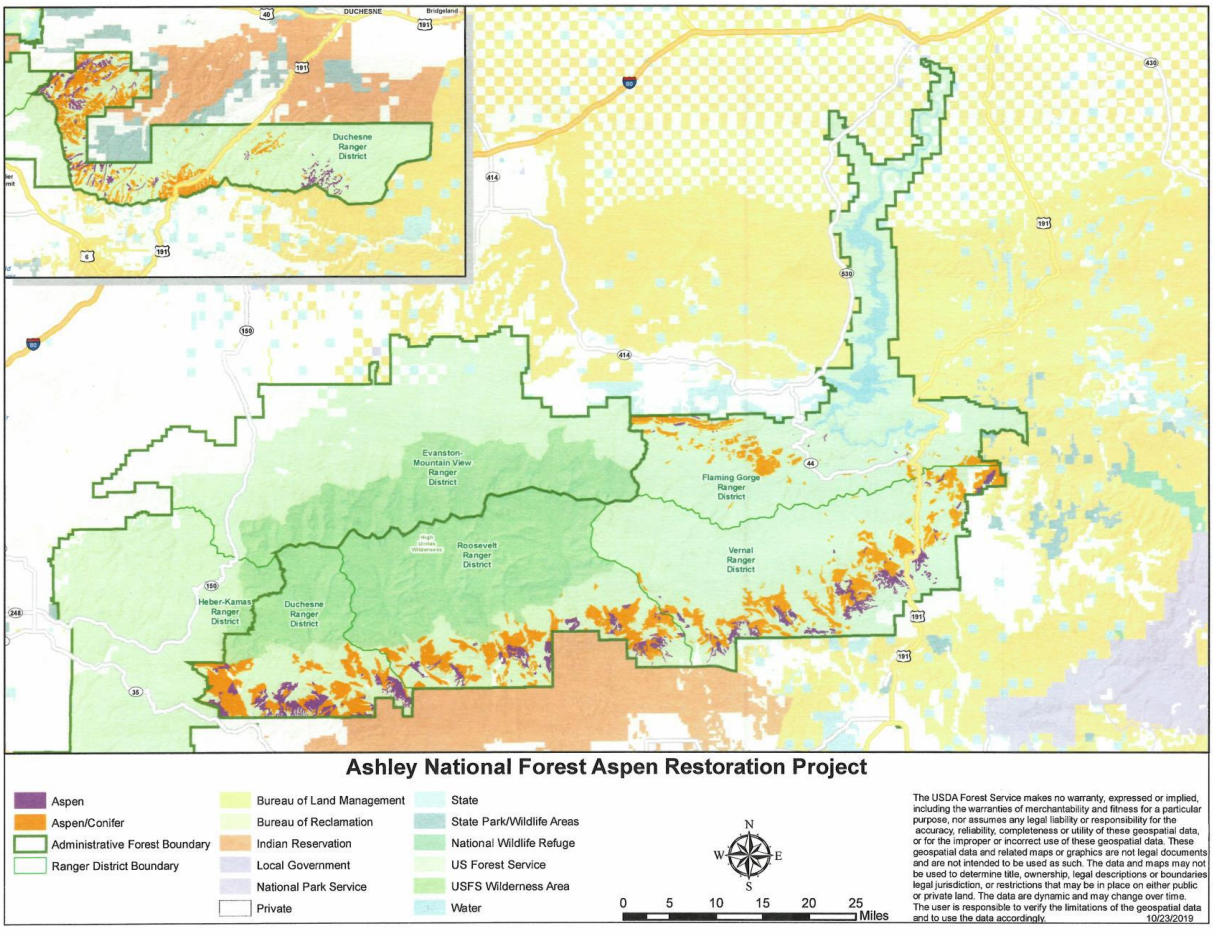

Figure 2. Project area map. Displays the aspen and aspen-conifer vegetation types on the Ashley National Forest that is outside of designated Wilderness. There are approximately 177,707 acres on the Ashley National Forest.

PROPOSED ACTION

This project would allow for treatments in any aspen community across the Ashley National Forest outside of designated Wilderness, approximately 177,707 acres. Aspen restoration may occur within Inventoried Roadless Areas (IRAs). Any tool or method used to treat aspen would be consistent with the Roadless Rule, including the cutting, sale, or removal of generally small diameter timber and that the cutting, sale, or removal must maintain or improve one or more roadless characteristics. Within any of the Research Natural Areas, no mechanical treatments would be used to treat aspen (fire only).

Over the last ten years (2009-2018), the Ashley National Forest have treated approximately 9,934 acres of aspen, averaging about 1,000 acres per year. Based on the results of implementing these projects, our team is confident that we understand the effects of the proposed treatments when applied under certain conditions. The NEPA analysis considers the effects of each of the treatments that could be implemented based on an existing condition. After the analysis is complete, specific project areas would be identified and on-the-ground assessments (Appendix B) would be completed to determine the ecological condition of the aspen stands, the potential for problems with ungulate browsing, and other local factors. Based on the site-specific conditions and an interdisciplinary review, the appropriate treatment(s) for the project area would be selected (from the list below). Treatment actions would target the most effective management option and be followed by post-treatment monitoring. Based on the monitoring results, additional management actions (from the list of treatments) may be implemented if needed to achieve restoration objectives.

Based on the results of the assessments, actions used to maintain or improve conditions for aspen may include one or more of the following:
1. Prescribed burning (broadcast) that would target aspen and aspen-conifer stands within larger project areas under predetermined weather and fuel conditions (identified in the approved project Burn Plan). Where possible, project areas would be identified to minimize ground disturbance by utilizing existing roads, trails, and terrain to contain the fire. Fire lines would be constructed if necessary.
2. Selectively cut conifers, aspen or both using hand crews with chainsaws or ground-based mechanized equipment (i.e. masticator, skid steer, skidder, etc.).
3. Removal of all aspen and conifers using hand crews with chainsaws or ground-based mechanized equipment.
4. Cut material associated with mechanical treatments may be:
a. Left in place or moved (e.g. to act as physical barriers to protect aspen from browsing or to provide fuel for a later prescribed fire).
b. Removed, potentially as a commercial sale (e.g. firewood, post and pole, other types of biomass material, and sawlogs).
c. Hand or mechanically piled and later burned.
d. Chipped or masticated.
5. Girdling conifers (killing the tree but leaving it standing) within aspen stands.
6. Root separation (breaking up lateral roots at some distance from the parent aspen trees using mechanical equipment).
7. Protection from browsing (including, but not limited to wildlife proof fencing, 6-8’ high).
8. Protection from livestock using permitted grazing practices (e.g. temporarily resting pastures or allotments, or using fencing, water and or supplements to distribute livestock away from aspen stands).
9. Planting aspen and controlling competing vegetation.
10. Inventory and monitoring.
11. No treatment.

Table 2. Best Management Practices Required For The Project

Proposed Action	BMP/Mitigation Measure	Surveys
Prescribed Burning; Fireline Construction; hand treatments; mechanical treatment; girdling; roost separation; selectively cut conifers, aspen or both using hand crews with chainsaws or ground-based mechanized equipment (i.e. masticator, skid steer, skidder, etc.).	• Within goshawk territories, leave a minimum of 600 snags/100 acres (6 snags/acre) >= 8" dbh > 15 feet tall. If the minimum number of snags is unavailable, green trees should be substituted. If the minimum size is unavailable, then use largest trees available on site. • In aspen stands retain a minimum of 50 downed logs/10 acres >= 6" dbh > 8 feet in length or 30 tons/10 acres of coarse woody debris >=3" in diameter. These habitat components should be present at the stand level on average and, where they are available, distributed over each treated 10 acres. • Prohibit vegetative treatments within active northern goshawk nest areas (approximately 30 acres) and PFA's (approximately 420 acres surrounding the nest area) during nesting periods (March 1 –September 30). • Planned vegetative management treatments (excluding unplanned and unwanted wildland fire) in the mature and/or old structural groups in a landscape that is at or below the desired percentage of land area in mature and old structural stages (40% conifer, 30% aspen), should be designed to maintain or enhance the characteristics of these structural stages. Within these landscapes, the percentage of land area in mature and old structural stages treated should not move out of the mature and old structural stage. • Vegetative treatments designed to maintain or promote a VSS 4, 5 and/or 6 group, the percent of the group acreage covered by clumps of trees with interlocking crowns should typically range from 40-70% in post-flegling and foraging areas, and 50 70% in nest areas. To manage outside this range, it should either be shown that the range is not within PFC for the site, and that it is determined that managing outside the range will be consistent with landscape needs of the goshawk and its prey. • Work associated with treatments in aspen stands that occur adjacent to sage-grouse habitat will comply with the sage-grouse amendment. Site specific measures may be identified.	The presence or absence of northern goshawks, three-toed woodpeckers, and flammulated owls will be determined based on existing GIS data and/or field surveys (as needed) after a specific project area has been identified. Known goshawk nests within the identified project area will be checked for occupancy prior to implementation of selected treatments. Goshawk surveys will be conducted within suitable habitat in the identified treatment areas. These surveys will be completed during the nesting and/or post fledgling period at least one season before implementation - but two consecutive seasons of surveys prior to implementation is preferred. Known goshawk territories that intersect areas to be treated will have alternate nest areas identified if there are less than three nests known within the territory. These territories will also have 3 replacement nest areas identified. Alternate nest areas and associated PFA's should be identified in suitable habitat with similar vegetative structures as the active nest areas. Replacement nest areas and PFA's should be identified in habitat which will develop similar vegetative structures as the active nest area and PFA at the time the active and alternate nest areas are projected to no longer provide adequate nesting habitat.
Fence Construction	• Prohibit fence construction within active northern goshawk nest areas (approximately 30 acres) and PFA's (approximately 420 acres surrounding the nest area) during nesting periods (March 1 –September 30). • Fence construction in aspen stands that occur adjacent to sage-grouse habitat	The presence or absence of northern goshawks, three-toed woodpeckers, and flammulated owls will be determined based on existing GIS data and/or field surveys (as needed) after a specific project area has been identified. Known goshawk nests within the identified

	will comply with the sage-grouse amendment. Site specific measures may be identified.	areas for fence construction will be checked for occupancy prior to implementation of selected treatments. Goshawk surveys will be conducted within suitable habitat in the identified treatment areas. These surveys will be completed during the nesting and/or post fledgling period at least one season before implementation - but two consecutive seasons of surveys prior to implementation is preferred.

Biological Assessment

SPECIES CONSIDERED

Interagency cooperation between the Forest Service (or other federal agency) and the USFWS, regarding proposed, threatened, or endangered species, is described in Section 7 of the Endangered Species Act. Definitions relating to "consultation" and "conference" are given in FSM Supplement 2600-90-6. Using the USFWS IPaC Tool, the USFWS provided the Ashley NF with a list of Threatened and Endangered species and Proposed and Candidate species for the Counties in which the project resides (Duchesne, Uintah, Daggett, Wasatch, Summit, and Utah Counties). This list was provided to the Ashley NF on February 10th, 2020 (USFWS 2020). The species are listed in the table below. Potential for suitable habitat is determined for each of these T&E species that have potential habitat on the Ashley National Forest by reviewing GIS coverages of nearby occurrences, habitat models, and other available Utah wildlife GIS coverages and websites (e.g. USFWS website).

Table 3. List of Threatened and Endangered Wildlife (USFWS 2020) and the determination of their habitat occurrence in the project area.

Common Name	**Scientific Name**	**Status**	**Suitable habitat characteristics**	**Known on Ashley**
Canada lynx	*Lynx canadensis*	Threatened	Considered dispersers and no evidence of lynx reproducing in Utah. Track surveys 1999-2017 did not find hard evidence of lynx in the Uinta Mountains (Berg and Inman, 2010, Christensen 2015, USDA FS 2006, USDA FS 2007ab&c, USDA FS 2010-2017). Even if an individual lynx were on the Forest and thus 'exposed' to elements of the project, the effects to an individual lynx are expected to be negligible based on the following: 1) the project will not change vegetation types or remove snowshoe hare habitat, thus lynx habitat would not change to an unsuitable condition 2) the project is unlikely to impede movement of lynx within and through the LAUs, or impede the ability of a lynx to procure sufficient food, often a limiting factor; and 3) a lynx disturbed by human activity associated with the project may temporarily be displaced or may habituate to the activity, neither outcome of which is likely to alter the likelihood this individual would procure prey. **No effect to the Canada lynx; therefore, no further discussion will follow.**	Habitat is present, but the Ashley is considered to be unoccupied peripheral habitat (ILBT 2013. USDA FS 2007ab&c, USFWFS 2020). A breeding population of lynx does not occur on the Ashley and surveys indicate transient lynx are unlikely to spend much time, if any on the Ashley (Berg and Inman, 2010, ILBT 2013, Christensen 2015, USDA FS 2007ab&c, USDA FS 2010-2017).
Yellow-billed cuckoo	*Coccyzus americanus*	Threatened	Yellow-billed cuckoo nests in lowland riparian hardwoods (nest 2,500-6,000feet elevation) this habitat is not present within the proposed project area. **No Effect; therefore, no further discussion will follow.**	Suitable habitat is not present on the Ashley.
Mexican spotted owl	*Strix Occidentalis lucida*	Threatened	Typical habitat on the Colorado Plateau (Utah) and southern Rocky Mountains	Suitable habitat is not present on the Ashley.

			(Colorado) is steep-sided canyons containing pockets of usually coniferous overstory trees mixed with smaller Gambel oak and box elder trees. Surveys have been done on the Ashley, but this owl has not been found on the Ashley. The US Fish & wildlife Service believes that the northern extent of the MSO range is Nine Mile and Argyle Canyons which are south of the Ashley NF. **No Effect; therefore, no further discussion will follow.**	

In the 2013 Lynx Conservation Assessment Strategy (LCAS) the Interagency Lynx Biology Team, as well as the USFWS in their Lynx Recovery Outline, identify the Ashley NF as a peripheral area for Canada lynx that is incapable of supporting self-sustaining populations of lynx, or to be used by a breeding female lynx (ILBT 2013). The intent of the 2013 LCAS regarding peripheral habitat is to provide a mosaic of forest structure within the landscape (flexibility in the amounts and arrangement of such structure) to support snowshoe hare prey resources for individual lynx that could infrequently move through or reside temporarily in the area (ILBT 2013). The 2007 Northern Rockies Lynx Management Direction (NRLMD) ROD identifies the Ashley NF as unoccupied lynx habitat, and as such is not required to follow the direction in the ROD (USDA Forest Service 2007a, b &c). The Ashley NF has considered the direction in the NRLMD ROD, however the 2013 LCAS contains the later research. Therefore the proposed project was reviewed in the context of the intent of the 2013 LCAS in regards to peripheral areas as well as the likelihood of a lynx actually being affected by the proposed project.

The likelihood of an individual lynx being exposed to human activities facilitated by the project is very low given that the Ashley is considered unoccupied and that there are likely very few, if any lynx, on the Ashley NF other than the occasional wandering lynx transplant from Colorado at this point in time (Berg and Inman 2010, Christensen 2015, ILBT 2013, USDA Forest Service 2006, USDA Forest Service 2007ab&c, USDA Forest Service 2010-2017). Thus the chances of the project affecting a Canada lynx is highly unlikely. Even if an individual lynx were on the Forest and thus potentially 'exposed' to elements of the project, the effects to an individual lynx via disturbance are expected to be negligible based on the following: 1) the project design is to improve the persistence of aspen stands on the Forest, which would improve this type of snowshoe hare habitat; 2) although encroaching conifers in stands classified as aspen may be removed, the project would not affect stands classified predominantly as spruce/fir mixed with aspen, stands classified as spruce/fir, stands classified as lodgepole, or stands classified as mixed conifer/deciduous; 3) the low likelihood of lynx ever occurring on the Ashley it is further unlikely that a wandering lynx would encounter elements of the project; and 4) given either 1, 2, or 3, or all three, a mosaic of lynx habitat would be retained on the Forest and the project would not impede movement of lynx through habitat, or the ability of a lynx to procure sufficient food, often a limiting factor if one ever happened to wander on the Ashley. For these reasons and the reasons given in the Table above, it is determined that the project would have "**no effect**" to Canada Lynx.

Biological Evaluation

SPECIES CONSIDERED

Those FSS species present or with suitable habitat within aspen and mixed aspen/conifer communities are anticipated to have the highest potential to be impacted by the proposed activities. Potential for suitable habitat is determined for each FSS species that is known to occur or have potential habitat on the Ashley National Forest by reviewing GIS coverages of nearby occurrences, habitat models, and other available Utah wildlife GIS coverages and websites. If any FSS wildlife species are identified during pre-

implementation surveys, appropriate mitigation measures will be applied to reduce the impact of proposed actions on those species.

Table 4. USDA Forest Service Sensitive Species either occurring, potentially occurring, or that may be influenced by management actions on the Ashley NF.

Scientific name	Common name	Suitable habitat characteristics	Known on Ashley	Known in Aspen or Mixed Aspen/Conifer Communities
Ovis candadendsis	Bighorn sheep	Bighorn sheep prefer open habitat types (high alpine to lower grasslands) with adjacent steep rocky areas for escape and safety. Habitat is characterized by rugged terrain including canyons, gulches, talus cliffs, steep slopes, mountaintops, and river benches. This species is present on the Ashley and NF.	Yes	No
Corynorhinor townsendii townsendii	Townsend's Western big-eared bat	Various habitats and elevations, but in Utah primarily found in shrub steppe and pinon/juniper habitats. Needs caves or mines for hibernation and maternity roosts; occasionally uses old buildings. Sensitive to disturbance at these roosts. Utah elevational range is 3,300-8,851 ft.	Yes	No
Euderma maculatum	Spotted bat	Various habitats and elevations, but most often collected in dry, rough desert terrain. Distribution thought to be limited by availability of roosts (primarily under loose rock or in crevices in rock cliffs). Locally they have been located near steep-walled stream canyons. Utah elevational range is 2,700-9,200 ft.	Yes	No
Haliaeetus leucocephalus	Bald eagle	Usually occurs near Flaming Gorge Reservoir and Green River corridor during winter; occasionally near other waters until freeze-up. A new nest was discovered spring of 2004 near Flaming Gorge and another along the Duchesne River (23 miles south of the Forest Boundary) in Spring of 2005. Generally a migrant on the rest of the Ashley.	Yes	No
Aegolius funereus	Boreal owl	Spruce/fir or mixed conifer forest. Possible but less likely in pure lodgepole. Unlikely to be found in aspen. Secondary cavity	Yes	No

		nester; needs large (13"+) diameter trees for nesting. Availability of suitable nest sites can limit population size.		
Centrocercus urophasianus	Greater sage-grouse	Sage grouse populations are allied closely with sagebrush habitats. Sagebrush habitats are important for the survival of nesting and wintering sage grouse.	Yes	No Sage-grouse habitat is not proposed for treatment. However, habitat could be adjacent to aspen stands targeted for treatment. The treatments are likely to have no impact to sage-grouse occurring in adjacent sagebrush if the Sage-Grouse Amendment is followed.
Falco peregrinus anatum	Peregrine falcon	Known to nest on cliffs along Flaming Gorge Reservoir on the Ashley. Usually found where rivers, marshes or other wet habitats are associated with cliffs.	Yes	No
Psiloscops flammeolus	Flammulated owl	Typical habitat for this species is ponderosa pine or Douglas fir forests. Has been located on both the Ashley NF. Secondary cavity nester.	Yes	See below
Picoides tridactylus	Three-toed woodpecker	Coniferous forests, or conifer mixed with aspen. Has been found in lodgepole, Douglas fir, spruce/fir and mixed conifer on the Ashley. Excavates a new cavity for nesting each year. Forages by prying off loose, scaly tree bark to find insects. Trees used for both nesting and foraging average 11" dbh or more. Management recommendations include maintenance of some snags greater than 12" dbh, and with some bark still present.	Yes	See below.
Strix nebulosa	Great gray owl	Conifer or conifer/hardwood forests. Two (possibly 3) recent locations and one historic record on Ashley, all in mixed conifer. Uses old stick nests constructed by other species, depressions in broken tops of trees, etc. for nesting. Uinta Mountains are at or just beyond southern limit of normal range; species is considered casual or irregular in Utah.	No	No
Accipiter gentilis	Northern goshawk	Most forest types. Uses a wide variety of forest types,	Yes	See below

		but majority of known breeding territories are in lodgepole or mixed conifer stands. Home ranges include a variety of stand ages and structures, but older-age stands with a high density of large trees, relatively high canopy closure and high basal area are preferred for nesting. Stands with large trees and relatively open understories are preferred for foraging. Can be sensitive to disturbance during the nesting season.		
Brachylagus idahoensis	Pygmy rabbit	Typically in dense stands of big sagebrush growing in deep loose soils. In southwestern Wyoming pygmy rabbits selectively used dense and structurally diverse stands of sagebrush that accumulated a relatively large amount of snow. Present on the Flaming Gorge Ranger District, on the NRA.	Yes	No
Gulo gulo	Wolverine	Tundra, boreal forests, coniferous forests of western mountains. Needs a diversity of habitats to support its prey base, especially large mammals (scavenged ungulate carrion is an important food source). Habitat may be better defined as large, sparsely inhabited areas with adequate food than by topography or vegetation. May be restricted to high elevation, remote portions of mountain ranges.	No	See below
Danaus plexippus plexippus	Monarch butterfly	This species is strongly tied to milkweed - reproduction is dependent on the presence of milkweed, the sole food source for larvae. (USDI FWS 2020)	Yes – species may occur on the Forest during parts of its life cycle, but not during winter	No

DETERMINATION

Not all of these sensitive species known or suspected to occur on the Forests are likely to be impacted by the proposed action. The proposed actions associated with the Ashley National Forest Aspen Restoration Project are expected to have **No Impact** to sensitive species not known to exist in, or not known to have an association with aspen and aspen/conifer mixed forests. A **No Impact** is also expected for wolverine, and rationale for this determination is provided below. For all other sensitive species listed below, the proposed actions **May Impact Individuals, but Will Not Likely Contribute to a Trend Towards Federal Listing or Loss of Population Viability**.

Flammulated owl (*Psiloscops flammeolus)*

The flammulated owl, *Otus flammeolus*, is a common raptor in montane pine forests (especially ponderosa pine forests) in the western United States. This species migrates from its wintering grounds in

central Mexico, the highlands of Central America, and coastal California to its breeding grounds across western North America. Breeding areas extend from southern British Columbia southward through the western United States, and into central Mexico. This species occurs in mountain ranges throughout Utah, but it is believed that breeding occurs primarily in southwestern and the north-central parts of the state. Individuals of this species are more likely to be heard than seen due to their small size (approximately 6 in. long) and elusive nature. The species is considered to be widespread, but loss of mature forest habitat may be having a detrimental effect on population numbers (UCDC 2019). There have been several detections of flammulated owls on the Ashley NF. Although the project may manipulate flammulated owl habitat, the intent of the project is to improve aspen stands, which would also improve habitat for the flammulated owl. Additionally, the goshawk guidelines were designed to maintain habitat for goshawk prey species and cavity nesters, thus following the goshawk guidelines (best management practices/mitigations listed above in Table 2) will maintain habitat for this species. Therefore, the project my impact individual flammulated owls, but is unlikely to result in a trend toward their federal listing or loss of viability.

Three-toed woodpecker *(Picoides tridactylus)*
The American three-toed woodpecker is found in Engelmann spruce, sub-alpine fir, Douglas fir, grand fir, ponderosa pine, tamarack, aspen, and lodgepole pine forests. In Utah, this woodpecker nests and winters in coniferous forests, generally above 2400 m (8,000 ft) elevation (UDWR 1998). American three-toed woodpeckers stay on their territories year-round, though insect outbreaks, such as spruce bark beetle infestations, may cause irregular movements.

Three-toed woodpeckers are documented to be prolific on the Ashley NF, but do not typically occur in aspen. However, some conifers in aspen will likely be removed. The goshawk guidelines were designed to maintain habitat for goshawk prey species and cavity nesters, thus following the goshawk guidelines (best management practices/mitigations listed above in Table 2) will maintain habitat for this species in the event that three-toed woodpeckers use conifers in the areas targeted for treatment. Additionally, three-toed woodpeckers have been documented to be very tolerant of human activities and human disturbance is not considered a threat to their populations (Leonard 2001). Therefore, this species is unlikely to be disturbed by noise associated with project activities. Thus, the project my impact individual three-toed woodpeckers, but is unlikely to result in a trend toward federal listing or loss of viability.

Northern goshawk *(Accipiter gentilis)*
This species inhabits coniferous, deciduous, and mixed forests in North America and prefers to forage in closed canopy forests with moderate tree densities as compared to young forests (Graham et al 1999). A goshawk's home range may be up to 6,000 acres and has three main habitat component needs (nesting, post fledgling area, and foraging area) within this home range (Reynolds 1992). Nesting areas are typically 30 acres in size and may include more than one nest (Reynolds 1992). The post-fledgling area is 420 acres in size and surrounds the nest area (Reynolds 1992). The post-fledgling area typically includes a variety of forest types and conditions, but it should contain patches of dense trees as well as developed herbaceous areas and shrubby understory, snags, downed logs and small openings (Reynolds 1992). These attributes are needed to provide the necessary habitats for hunting, security and prey species (Reynolds 1992). The foraging area is approximately 5,400 acres and surrounds the post-fledgling area (Reynolds 1992).

Management recommendations for the northern goshawk were written by Reynolds (Reynolds et. al. 1992). In 1998, a Conservation Strategy and Agreement for the Management of Northern Goshawk Habitat in Utah was developed and agreed to by the Utah National Forests, Bureau of Land Management, U. S. Fish and Wildlife Service, and the Utah Division of Wildlife Resources. This Conservation Strategy

was based on the best available science for forest habitats in Utah to support viable populations of goshawks (USDA Forest Service et. al. 1998). The Ashley Forest Plan was amended in 2000 and incorporates guidelines from Reynolds 1992. Since this strategy and amendment was developed, there have been several peer reviewed studies that dispute Reynolds' research (example, Beier et. al. 2008). However, after a review of opposing and supporting scientific literature (e.g., Beier et al. 2008, Greenwald et. al. 2005, Reynolds et. al. 2001, Reynolds 2004, and Salafsky et.al. 2007), it appears that the Conservation Strategy and the guidelines in the Forest Plan Amendment are still scientifically valid, (including those guidelines regarding snag retention for prey species) and continue to provide good conservation measures for the northern goshawk in forested habitats in Utah and on the Forest.

The ANF have annually monitored northern goshawks on the Forests since 1999 (USDA Forest Service 2017a, USDA Forest Service 2017b, USDA Forest Service 2017c). Goshawk occupancy has fluctuated since the date that data collection began (USDA Forest Service 2017b, USDA Forest Service 2017c, Christensen 2015), but fluctuations in occupancy and productivity are typical as is indicated in the Ashley 2006 MIS Report.

Many of the known goshawk nest areas and PFA's on the Forest intersect with aspen stands that may be included for possible treatments under this project proposal. Goshawk habitat may be manipulated with this project, however following the goshawk guidelines (the best management practices/mitigations listed above in Table 2) will maintain goshawk habitat (including prey species habitat) and protect nesting goshawks. Therefore, the project my impact individual goshawks, but is unlikely to result in a trend toward their federal listing or loss of viability.

Wolverine *(Gulo gulo)*

In 2014 a wolverine was documented on the north slope of the Uintas on the Uinta/Wasatch/Cache NF, and possible wolverine tracks were found by the UDWR near Dutch John on the Flaming Gorge RD that same year (Christensen 2015). However, these were likely a transient since no other documentation has been acquired since, and since no other occurrences were documented in the Uintas in the previous 20+ years (USDA Forest Service 2006, USDA Forest Service 2007ab&c, Berg and Inman 2010, ILBT 2013, Christensen 2015, USDA Forest Service 2010-2017, USFWS 2020). Wolverine are considered dispersers and there is no evidence of wolverine reproducing in Utah (USDA Forest Service 2006, USDA Forest Service 2007ab&c, Berg and Inman 2010, ILBT 2013, Christensen 2015, USDA Forest Service 2010-2017, USFWS 2020). Likewise, the USFWS does not consider wolverine to occur on the Ashley NF or the Uintas (USFWS 2020). Additionally, photographic bait stations monitored by Utah State University between 2005 and 2009 were placed throughout the Ashley NF, but there were no detections of wolverine (Christensen 2015). Annual winter carnivore track surveys conducted on the Ashley NF between 2009 and 2017 have yielded no wolverine detections (Berg and Inman 2010, Christensen 2015, USDA Forest Service 2010-2017). Even if an individual wolverine happened to wander on the Forest and thus 'exposed' to elements of the project, the effects to an individual wolverine are expected to be negligible based on the following: 1) the project will not change vegetation types or remove prey species habitat, thus wolverine habitat would not change to an unsuitable condition 2) the project is unlikely to impede movement of wolverine within and through the Forest, or impede the ability of a wolverine to procure sufficient food, often a limiting factor; and 3) a wolverine disturbed by human activity associated with the project may temporarily be displaced or may habituate to the activity, neither outcome of which is likely to alter the likelihood this individual would procure prey. Therefore, wolverine are unlikely to be present in or near the project area, and the nature of the project will not affect any life requisites of the wolverine, including late persistent snowpack (a limiting factor for breeding wolverine). Therefore, it is determined that there would be "no impact" to wolverine populations from the proposed project.

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